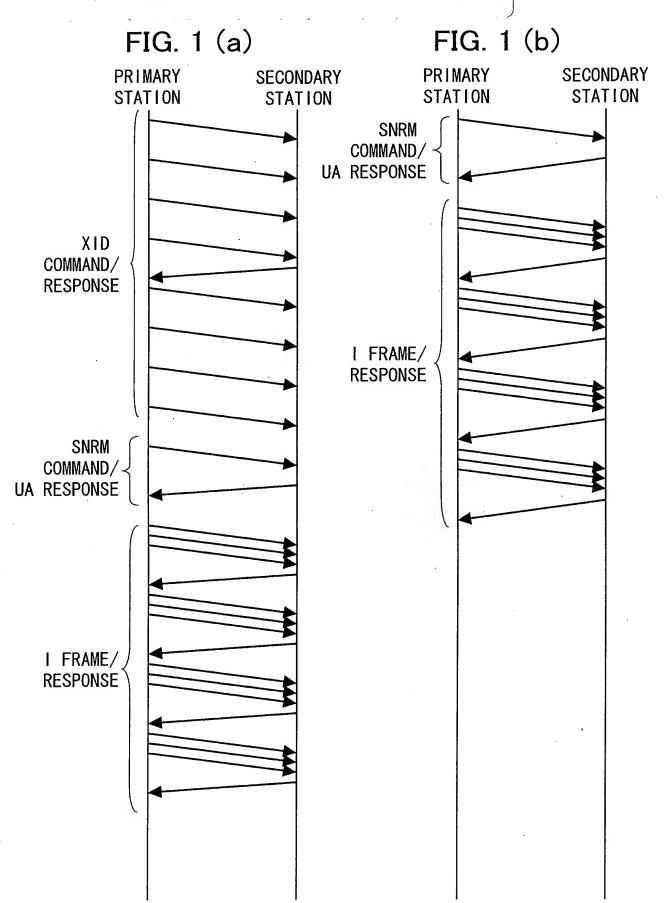
App No.: NEW Docket No.: 1248-0867PUS1 Inventor: Hitoshi NAOE et al.
Title: TRANSMITTER, RECEIVER, COMMUNICATION SYSTEM,
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Inventor: Hitoshi NAOE et al.
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FIG. 2

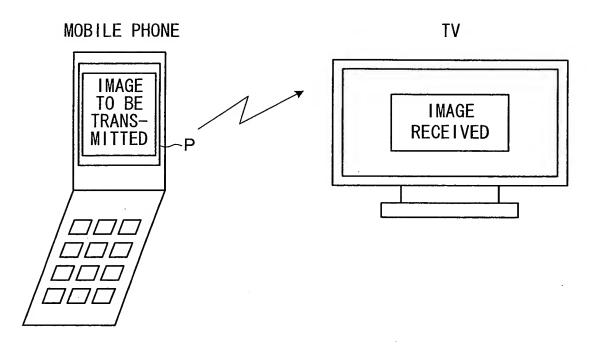
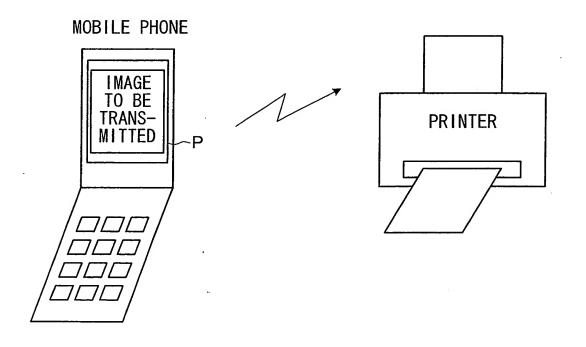


FIG. 3



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FIG. 4

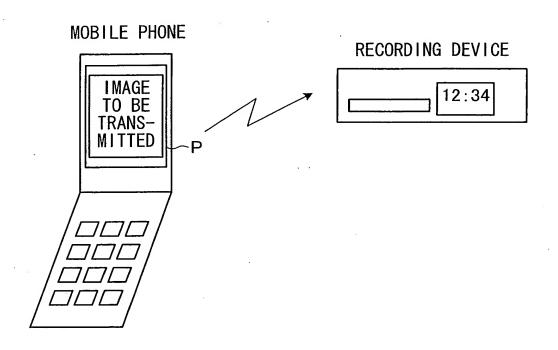
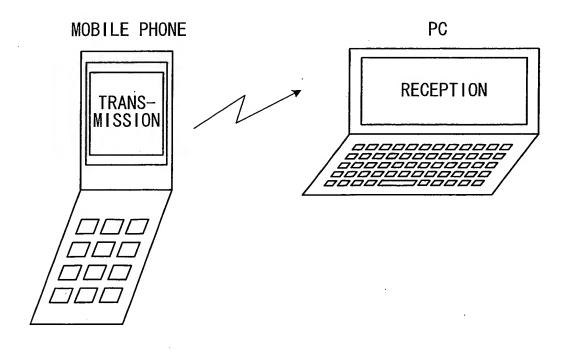


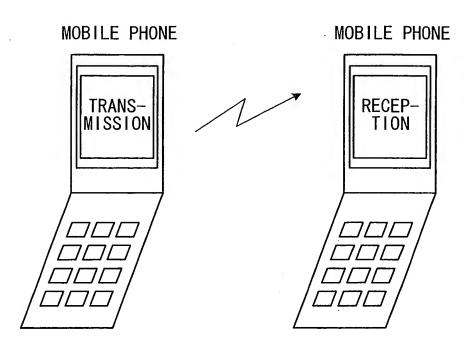
FIG. 5



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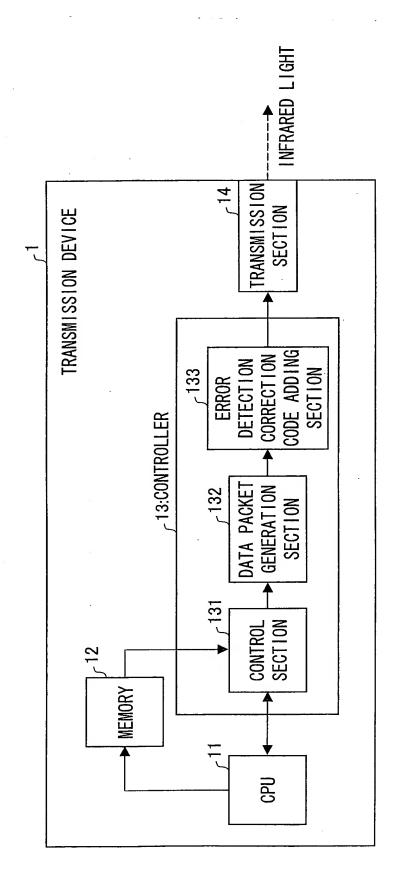
App No.: NEW Docket No.: 1248-0867PUS1 Inventor: Hitoshi NAOE et al.
Title: TRANSMITTER, RECEIVER, COMMUNICATION SYSTEM,
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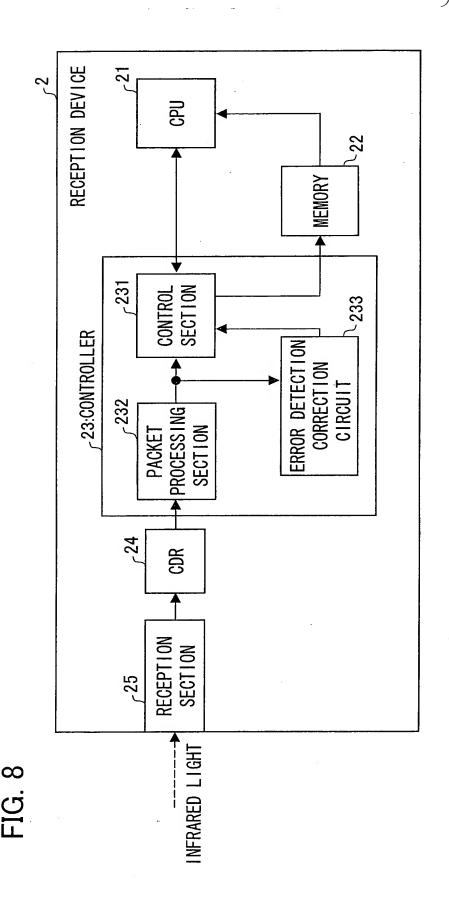
FIG. 6



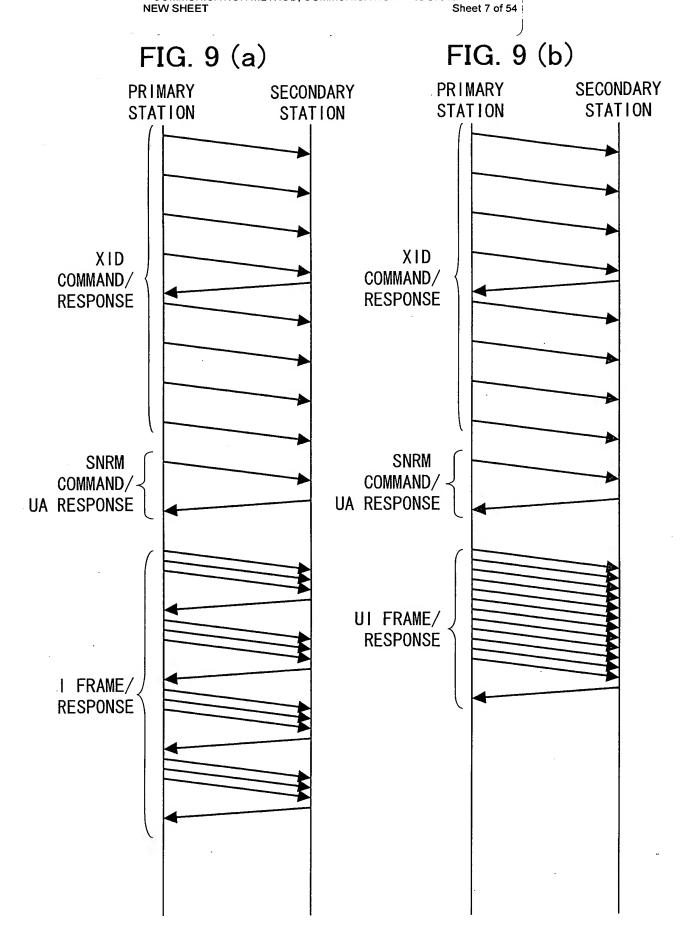
Docket No.: 1248-0867PUS1

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Inventor: Hitoshi NAOE et al.
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Title: TRANSMITTER, RECEIVER, COMMUNICATION SYSTEM, COMMUNICATION METHOD, COMMUNICATION PROGRAM



App No.: NEW

Docket No.: 1248-0867PUS1

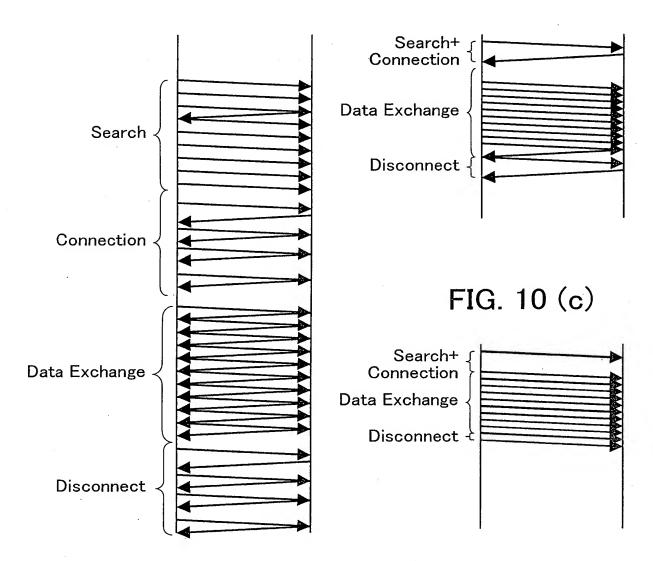
Inventor: Hitoshi NAOE et al.
Title: TRANSMITTER, RECEIVER, COMMUNICATION SYSTEM,

COMMUNICATION METHOD, COMMUNICATION PROGRAM **NEW SHEET**

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FIG. 10 (a)

FIG. 10 (b)



Docket No.: 1248-0867PUS1 App No.: NEW Docket No.: 1248Inventor: Hitoshi NAOE et al.
Title: TRANSMITTER, RECEIVER, COMMUNICATION SYSTEM,
COMMUNICATION METHOD, COMMUNICATION PROGRAM Sheet 9 of 54 **NEW SHEET** Connect Response Connect Request OBEX OBEX Parameters Parameters SMP SMP SNRM command Parameters Parameters Negotiation Negotiation Connection Connection Address Address device address device address Destination Destination Data link layer (Global) UA response for SNRM Source device Source device SNRM command address address UA response for SNRM FIG. 11 (c) SNRM SNRM

SNRM command

Addr=0xFE

C/R=1

Connection

C/R=0

Address

FIG. 11 (b)

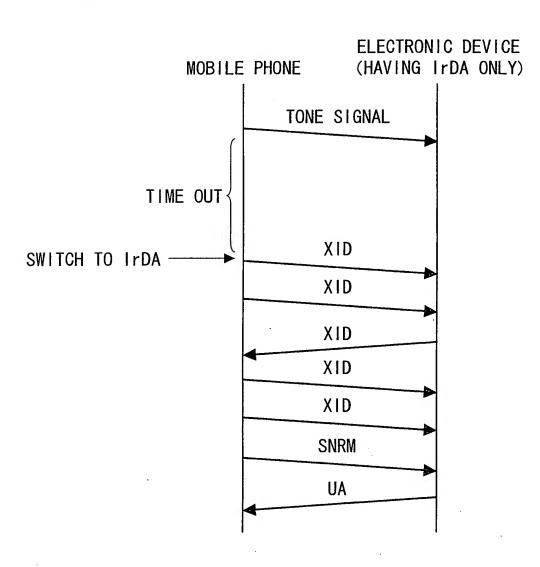
FIG. 11 (a)

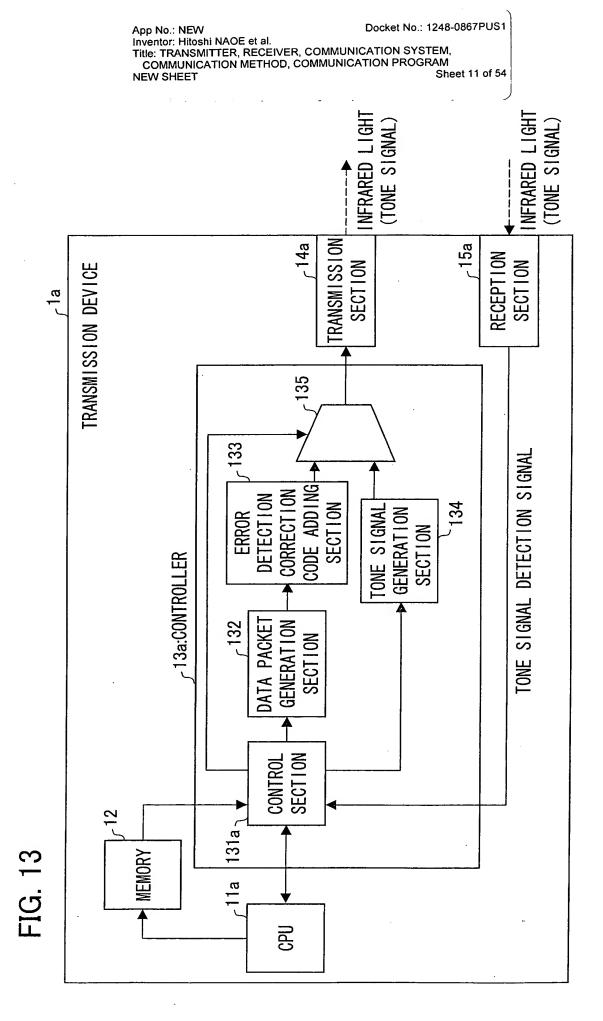
Inventor: Hitoshi NAOE et al.

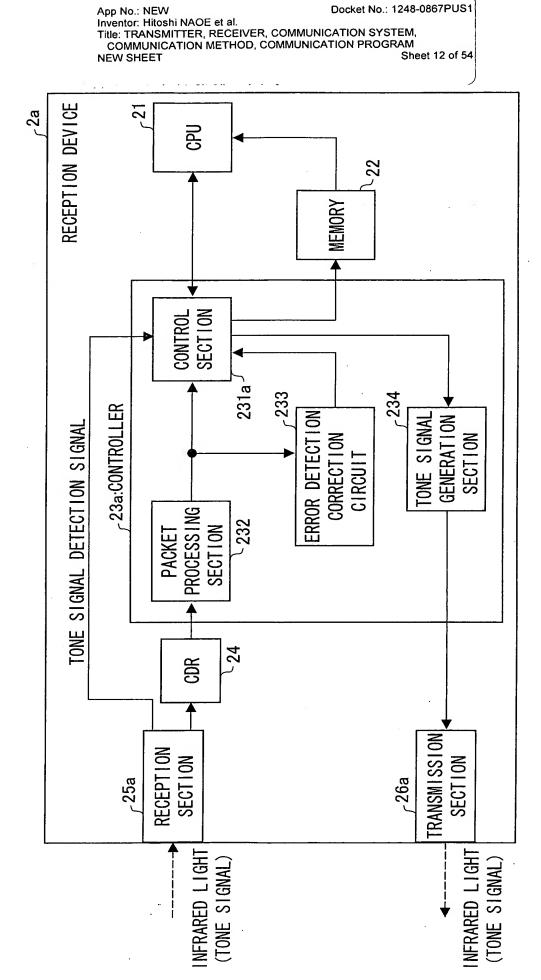
Title: TRANSMITTER, RECEIVER, COMMUNICATION SYSTEM, COMMUNICATION METHOD, COMMUNICATION PROGRAM

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FIG. 12



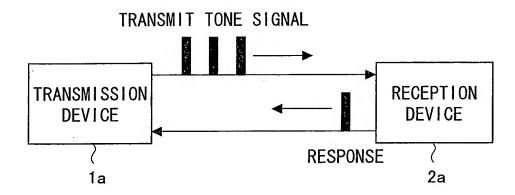




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FIG. 15



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FIG. 16 (a)

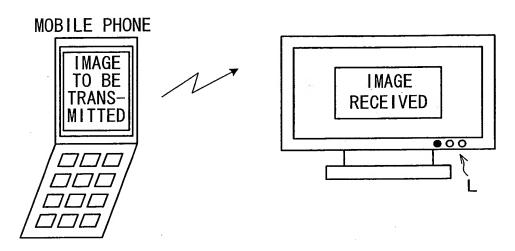


FIG. 16 (b)

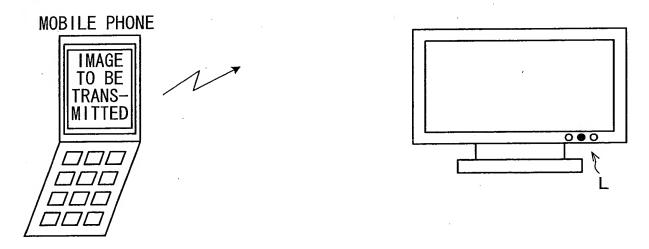
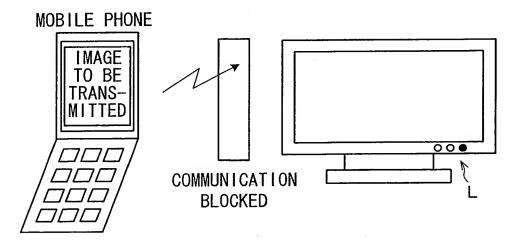


FIG. 16 (c)



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FIG. 17 (a)

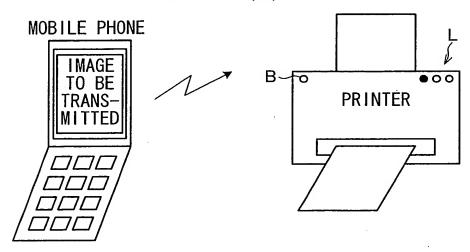


FIG. 17 (b)

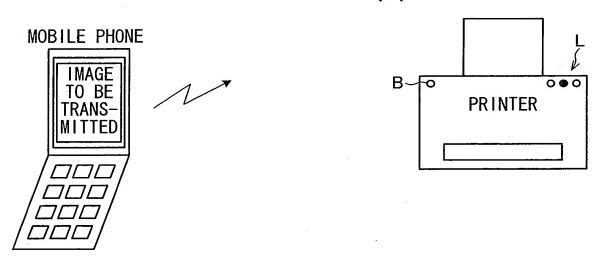
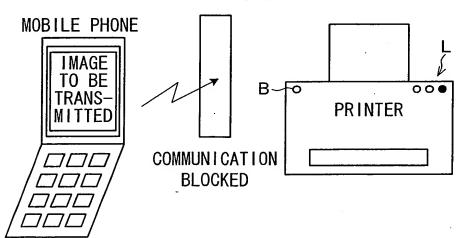
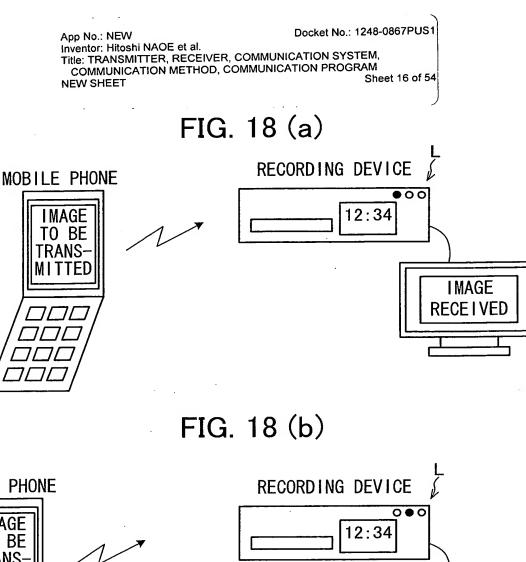


FIG. 17 (c)





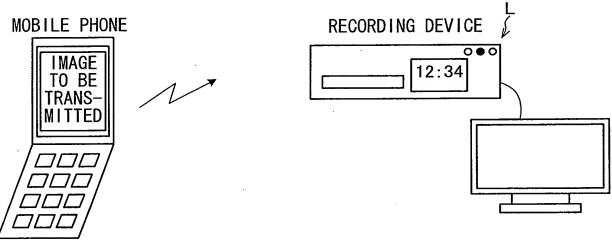
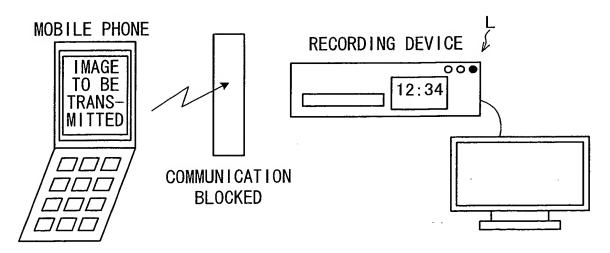


FIG. 18 (c)



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FIG. 19 (a)

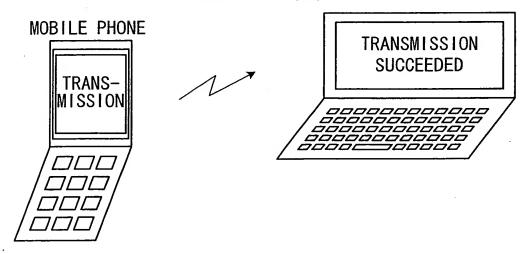


FIG. 19 (b)

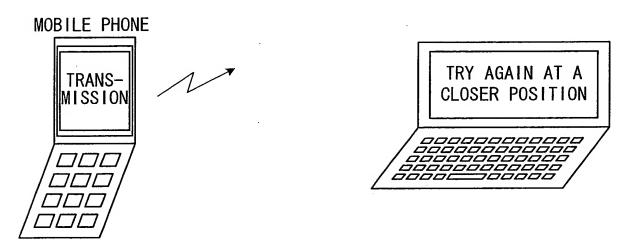
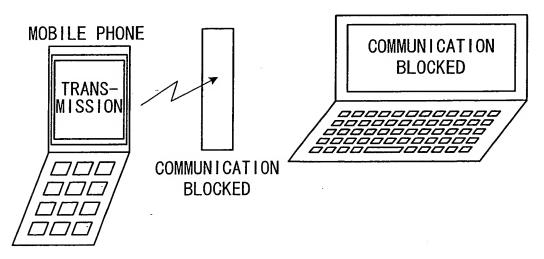


FIG. 19 (c)



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FIG. 20 (a)

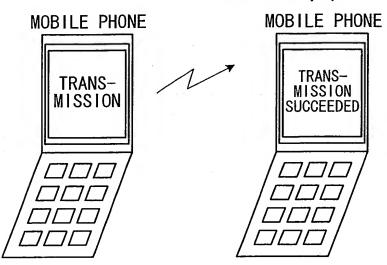


FIG. 20 (b)

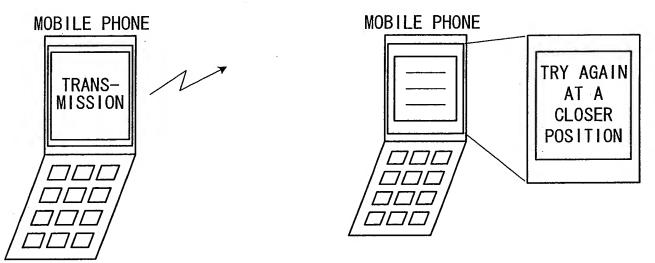
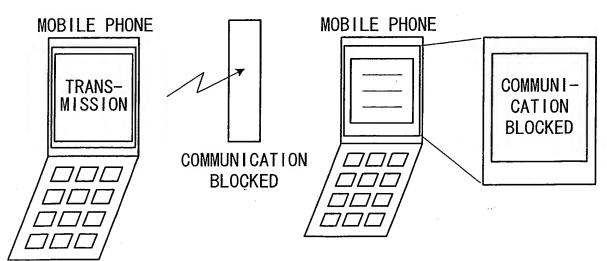


FIG. 20 (c)



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Inventor: Hitoshi NAOE et al.

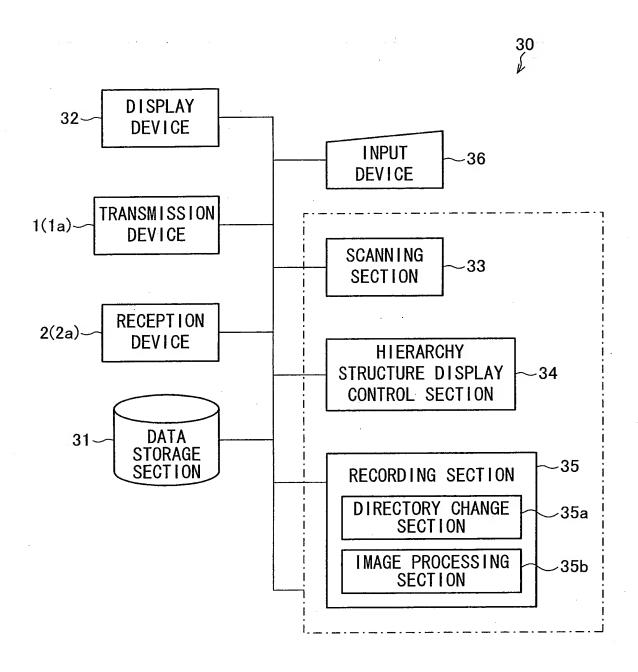
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NEW SHEET SI

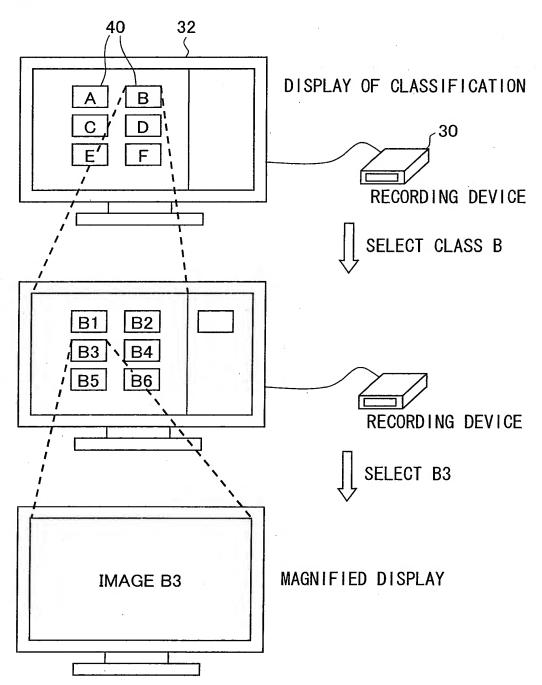
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FIG. 21



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FIG. 22

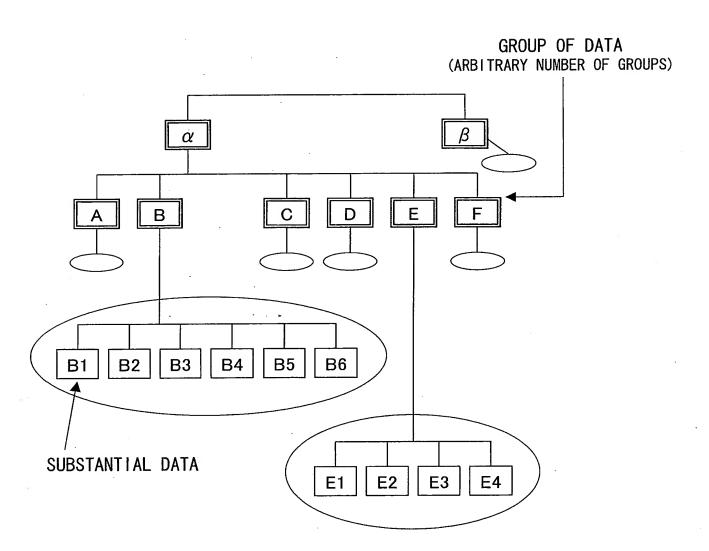


App No.: NEW Inventor: Hitoshi NAOE et al. Docket No.: 1248-0867PUS1

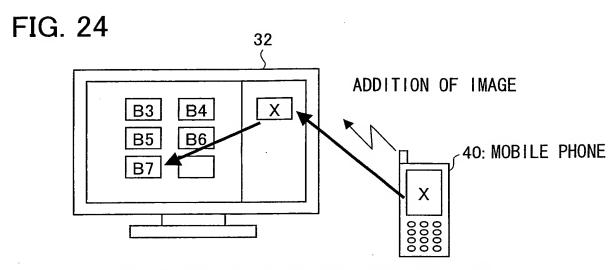
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FIG. 23

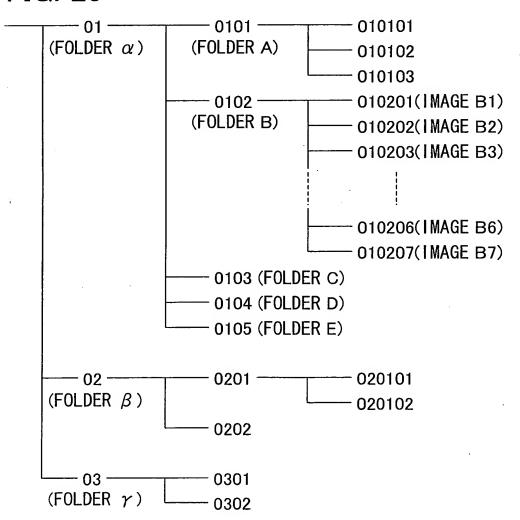


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Inventor: Hitoshi NAOE et al.
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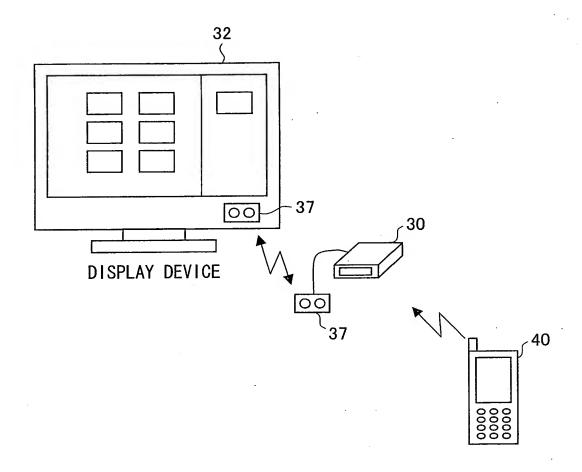
ADD NEW INFORMATION TO AN ARBITRARY POSITION IN THE HIERARCHY STRUCTURE

FIG. 25

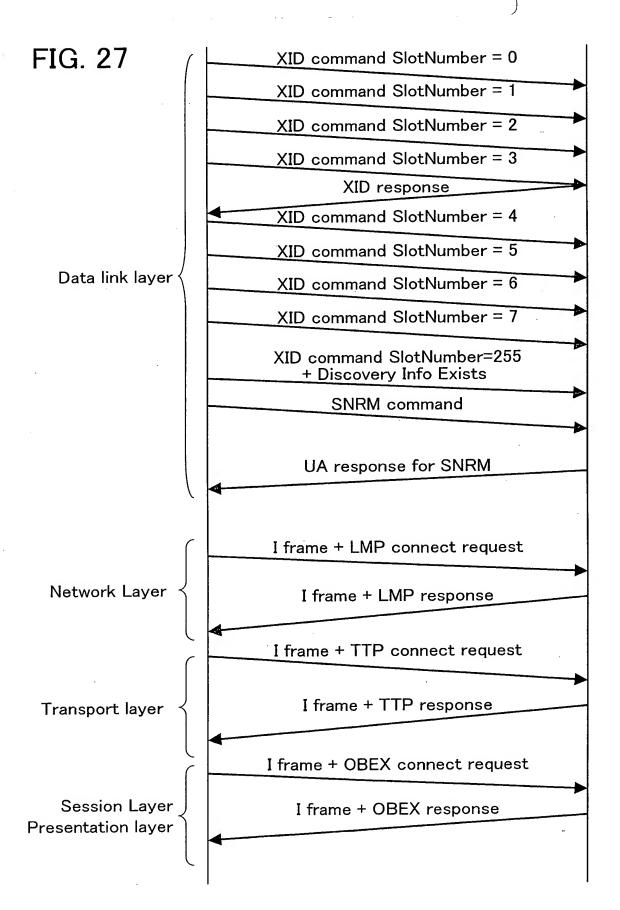


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FIG. 26



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XID command		1			-	Dectination		\vdash	_	
C/R=1 Addr=0xFE	XID	Format Identifier	at fier	Source device address		device address (Global)	s Discovery Flag	Slot No.	Version No.	Discovery Info Exists
XID response										-
C/R=1 Addr=0xFE	QIX	Format Identifier	at fier	Source device address		Destination device address	Discovery s Flag	sry Slot No.	Version No.	
SNRM command		C/R=1 Addr=0xFE		SNRM Sc	Source device address	ice Destination device address	 	Connection Address	Negotiation Parameters	ıtion sters
UA response for SNRM	LJ	C/R=0 Connection Address		SNRM Sc	Source device address	ce Destination device address		Connection Address	Negotiation Parameters	ıtion sters
I frame + LMP connect request	ct requ		Addr	Nr/Ns	LMP c	LMP connect request	st		·	
I frame + LMP response	Jse		Addr	Nr/Ns	LMP	p response				
I frame + TTP connect request	ct requ	L	Addr	Nr/Ns	LSAP	TTP cor	TTP connect request	.st		
I frame + TTP response	ıse		Addr	Nr/Ns	LSAP	ATT	TTP response			<i>)</i>
I frame + OBEX connect request	lect re		Addr	Nr/Ns	LSAP	TTP Header	OBEX cor	OBEX connect request	est	
I frame + OBEX response	onse		Addr	Nr/Ns	LSAP	TTP Header	OBEX	OBEX response	-	

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FIG. 29

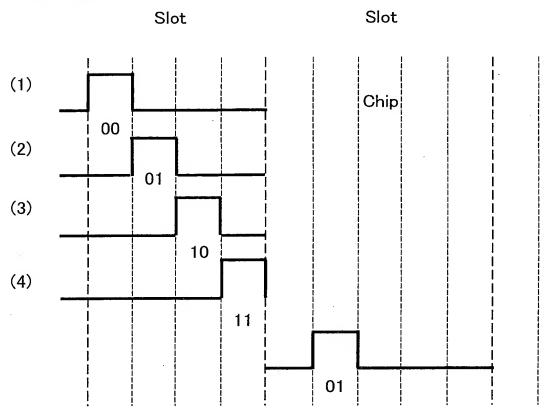


FIG. 30

	PREAMBLE FIELD	START FLAG	ADDRESS FIELD	CONTROL FIELD	DATA FIELD	FCS	STOP FLAG	
--	-------------------	---------------	------------------	------------------	---------------	-----	--------------	--

App No.: NEW

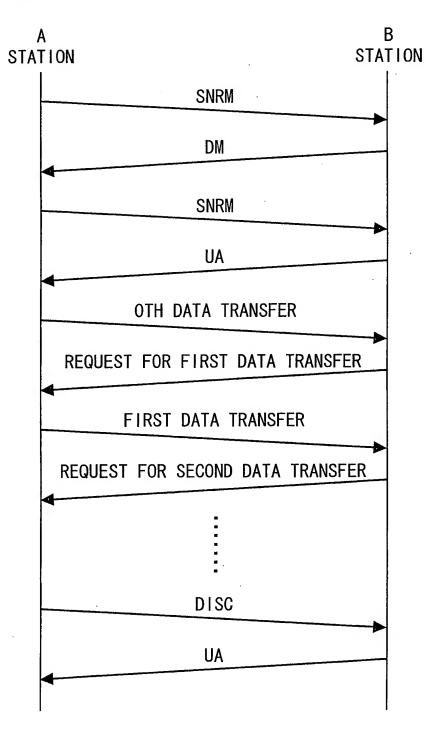
Inventor: Hitoshi NAOE et al.

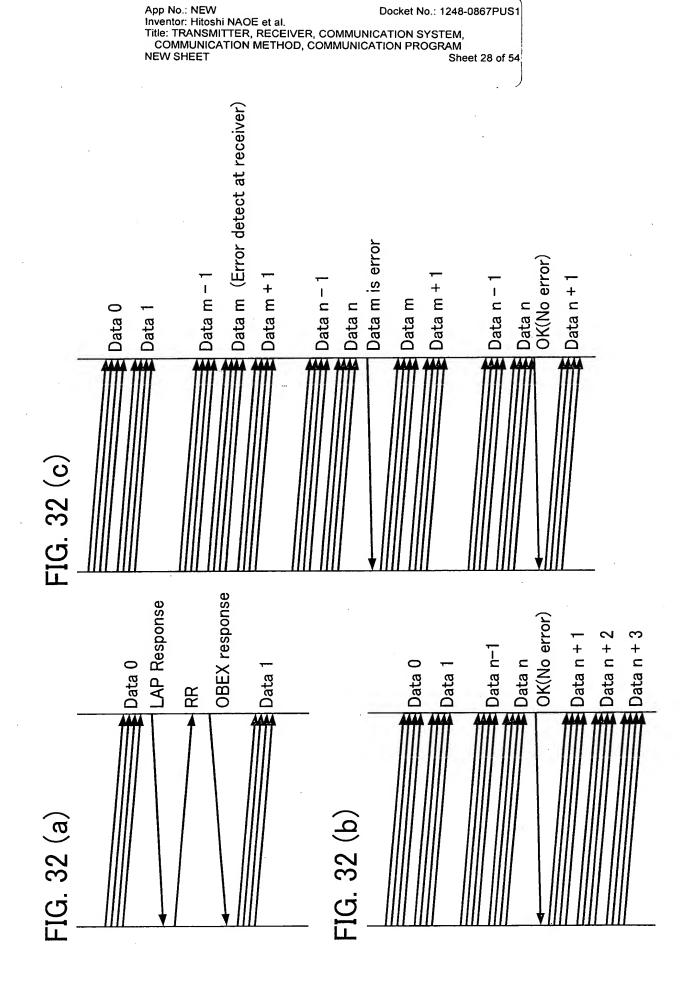
Docket No.: 1248-0867PUS1

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FIG. 31





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NEW SHEET Data m (Error detect at receiver) Data m -Data m + Data n – Data 1 Data n Data 0 Disconnect sequence Data m + 1 Data m -Data n - 1 Data m Data 0 Data n Data 1

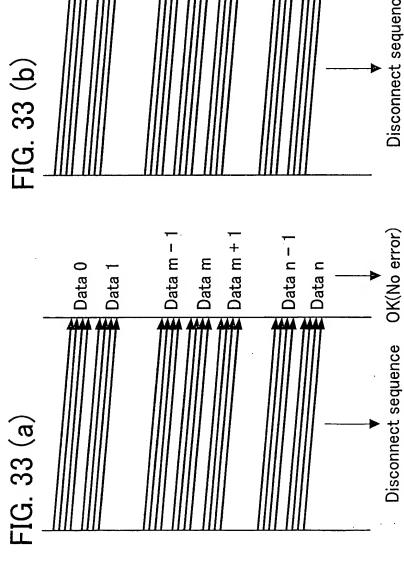


FIG. 34

OSI 7 HIERARCHY

IrDA HIERARCHY

HIERARCHY OF PRESENT INVENTION

=							6
HIERANGHI UF FRESENI INVENLLUN	FILE PRINTING TRANS- EXCHANGE ACTION	IrMC, IrFM, TranP	(OBEX, Ircom)	SMP	IrLMP IrSimple Addition	IrLAP IrSimple Addition	IrPHY
	FILE PRINTING TRANS- EXCHANGE ACTION	IrMC, IrFM, TranP	(OBEX, IrcoM)	TinyTP	IrLMP	IrLAP	IrPHY
	APPLICATION LAYER	RESENTATION LAYER	SESSION LAYER	TRANSPORT LAYER	NETWORK LAYER	DATA LINK LAYER	PHYSICAL LAYER

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Inventor: Hitoshi NAOE et al.
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App No.: NEW Docket No.: 1240-0007F05.
Inventor: Hitoshi NAOE et al.
Title: TRANSMITTER, RECEIVER, COMMUNICATION SYSTEM,
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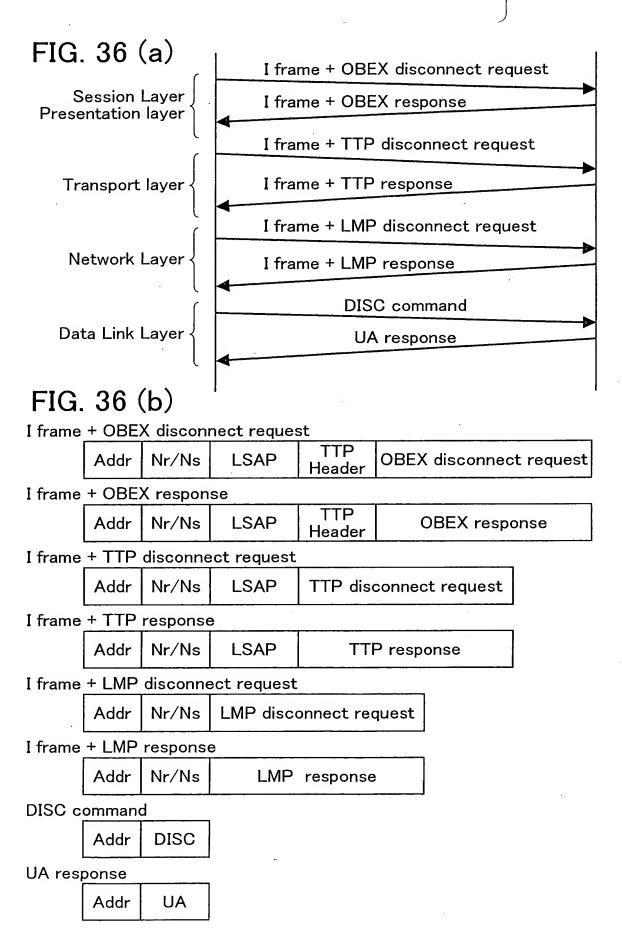
IrDA DATA FRAME (I FRAME)

OBEX Data
TTP Header
TSAP
Nr/Ns
Addr

DATA FRAME OF PRESENT INVENTION (UI FRAME)

OBEX Data
sending right Sequential Number
LSAP
i
Addr

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FIG. 37 (a)

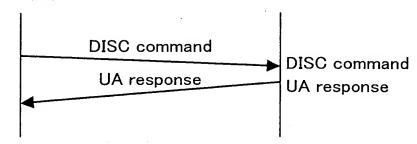


FIG. 37 (b)

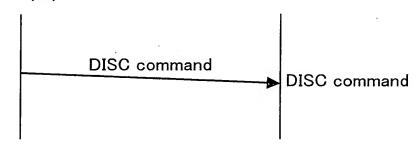
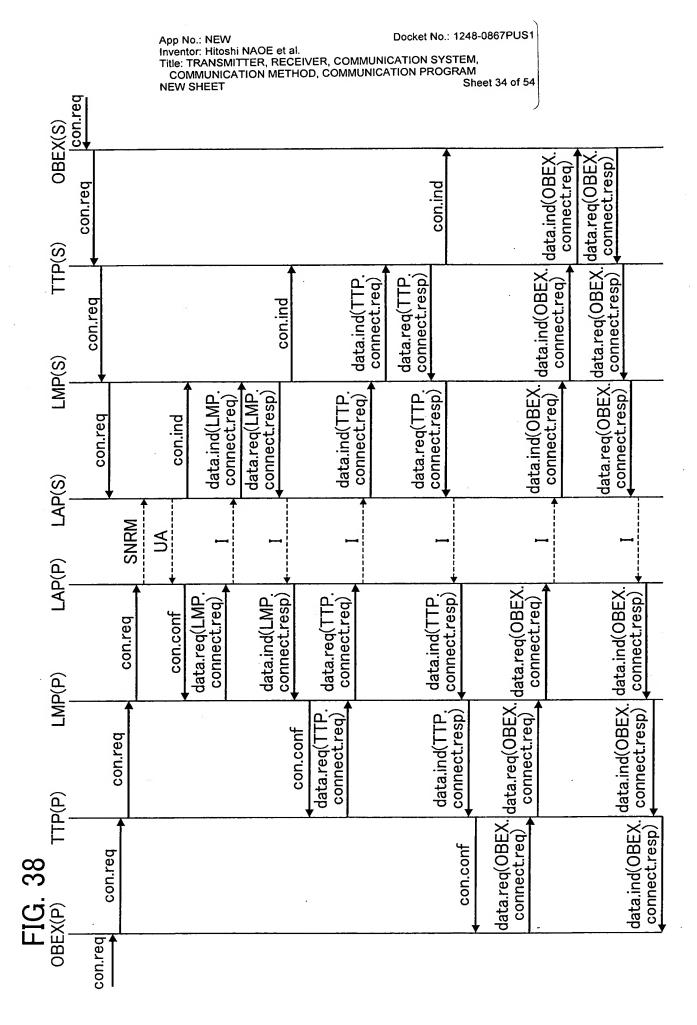
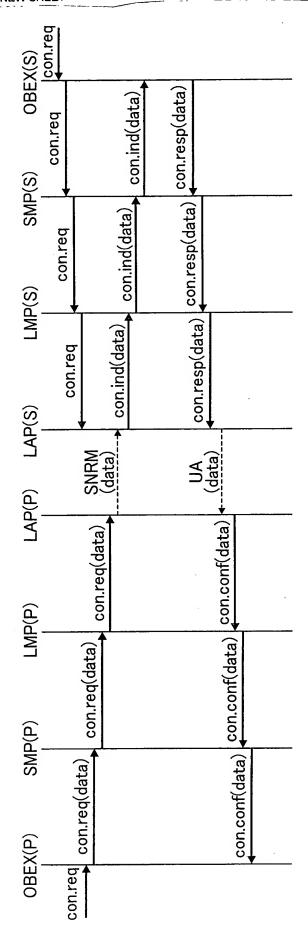


FIG. 37 (c)

Addr	DISC	OBEX Disconnect command	DISC command
Addr	UA	OBEX Disconnect response	UA response



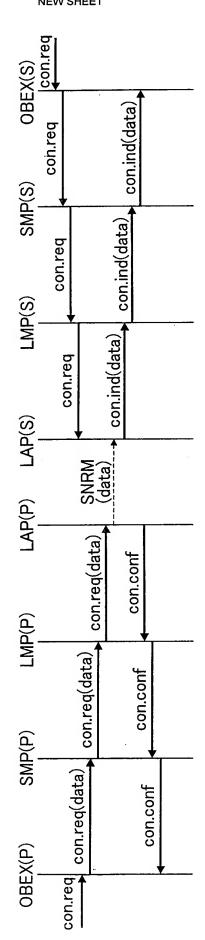
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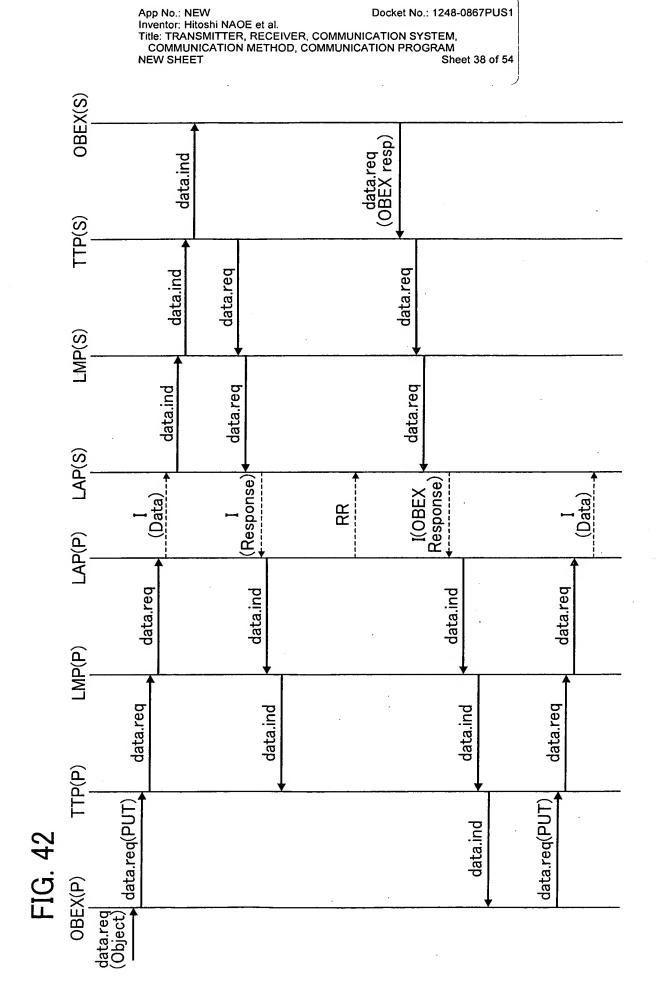


Inventor: Hitoshi NAOE et al. Title: TRANSMITTER, RECEIVER, COMMUNICATION SYSTEM, COMMUNICATION METHOD, COMMUNICATION PROGRAM Sheet 36 of 54 TRANSMITTER RECEIVER OBEX(S) TRANSMITTER RECEIVER OBEX(S) SMP(S) LAP(P)▼< LAP(S) SMP(S) / LAP(S) OBEX(P) OBEX(P) SMP(P) SMP(P) LMP(P) MP(P) Connect Response Response Response Response Connect Request Connect Connect Connect Connect Connect Connect Request Request Request OBEX OBEX OBEX OBEX OBEX OBEX OBEX Parameters Parameters Parameters Parameters Parameters Parameters SMP SMP SMP SMP SMP SMP Connection Negotiation Address Parameters Connection Negotiation Address Parameters device address device address Destination Destination (Global) Source device device address address Source FIG. 40 (a) FIG. 40 (b) SNRM SNRM Connection Addr=0xFE Address C/R=0

App No.: NEW

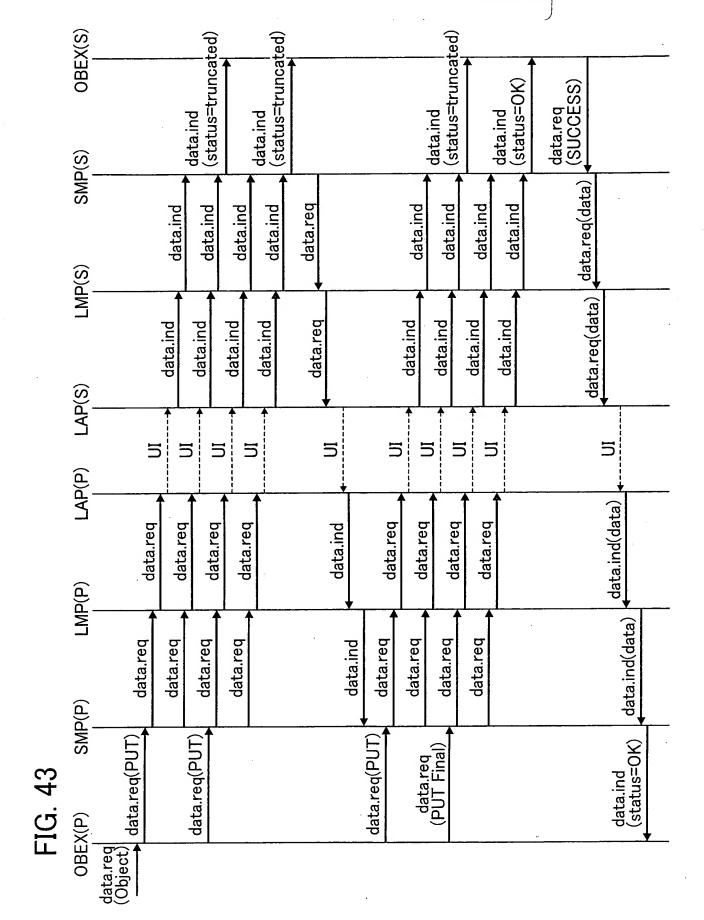
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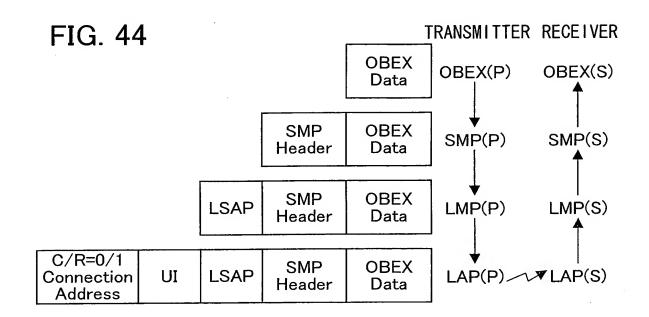


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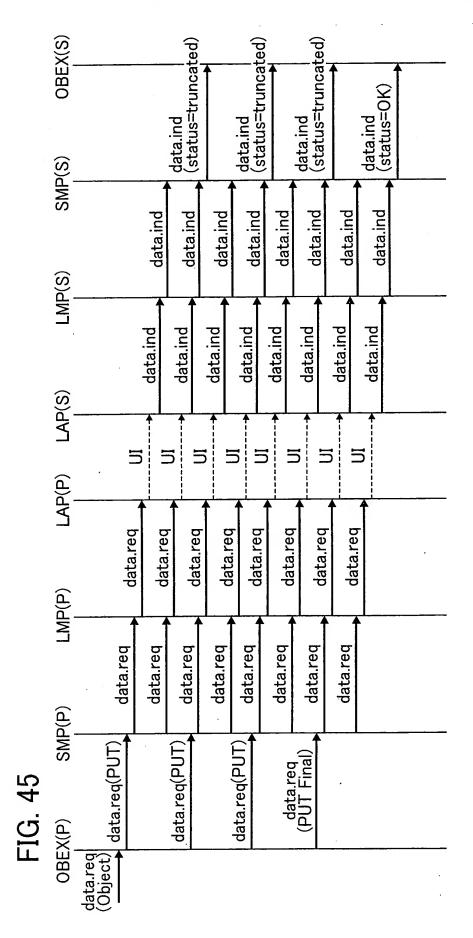


App No.: NEW Docket No.: 1248-0867PUS1 Inventor: Hitoshi NAOE et al.
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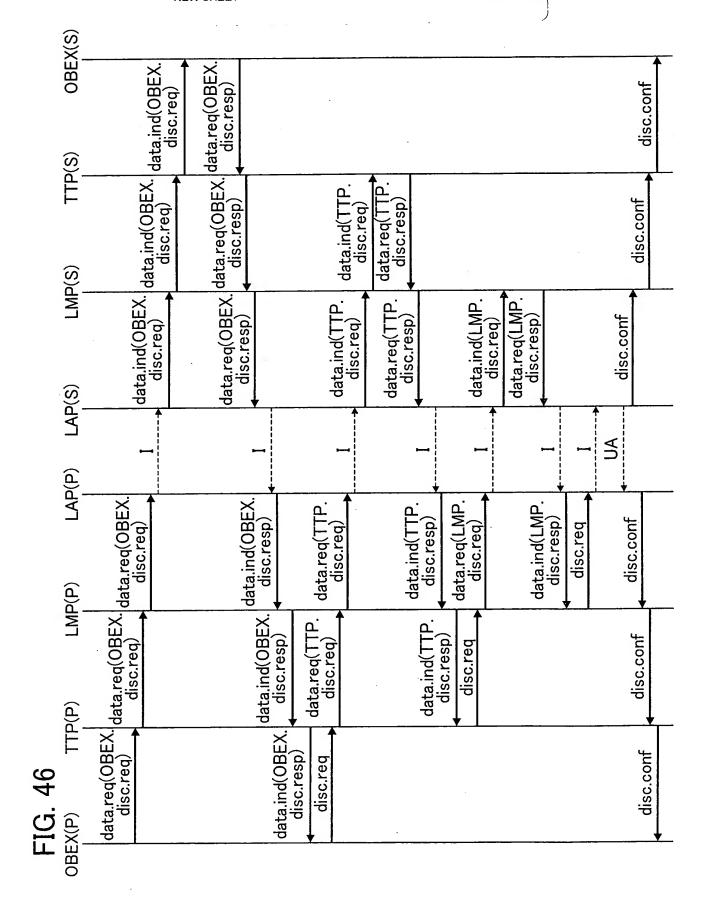


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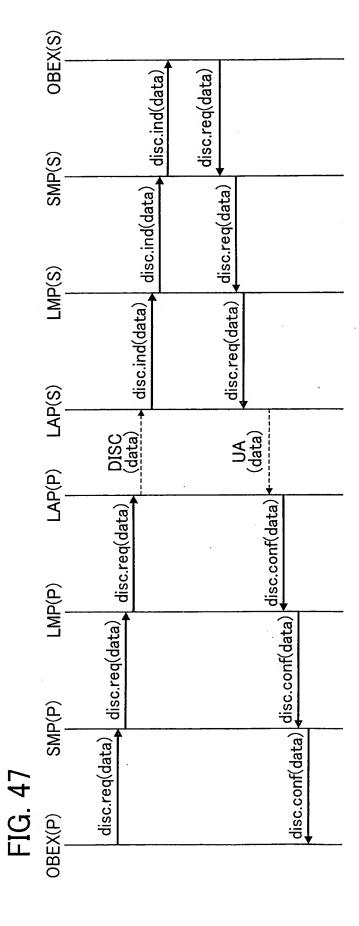


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FIG. 48 (a)

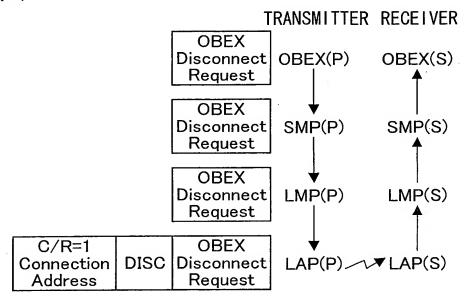
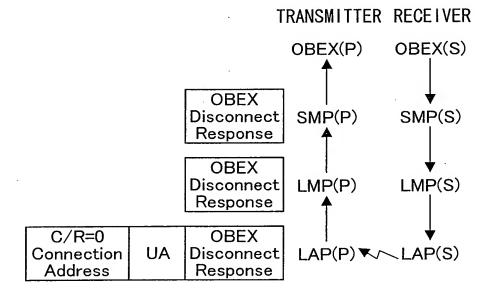


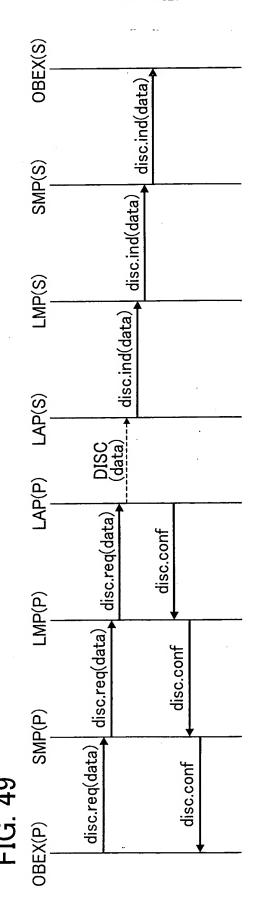
FIG. 48 (b)



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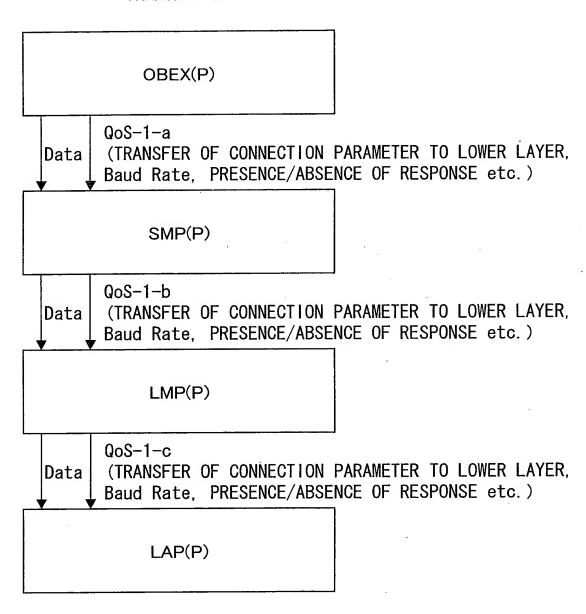
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FIG. 50

TRANSMITTER



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FIG. 51

RECEIVER OBEX(S) QoS-2-a (TRANSFER OF CONNECTION PARAMETER TO LOWER LAYER, Baud Rate, PRESENCE/ABSENCE OF RESPONSE etc.) SMP(S) QoS-2-b (TRANSFER OF CONNECTION PARAMETER TO LOWER LAYER, Baud Rate, PRESENCE/ABSENCE OF RESPONSE etc.) LMP(S) QoS-2-c (TRANSFER OF CONNECTION PARAMETER TO LOWER LAYER. Baud Rate, PRESENCE/ABSENCE OF RESPONSE etc.) LAP(S)

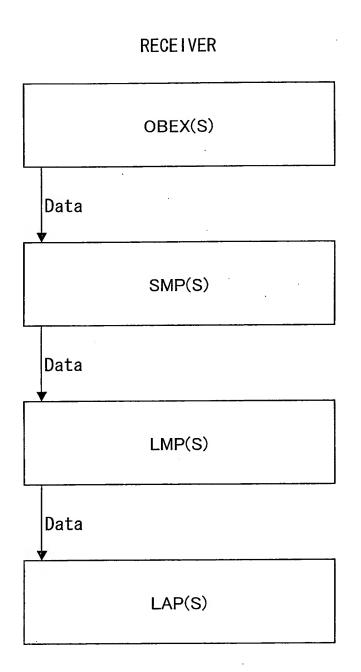
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FIG. 52

RECEIVER OBEX(S) QoS-3-a (TRANSFER OF CONNECTION PARAMETER TO UPPER LAYER, Data Baud Rate, PRESENCE/ABSENCE OF RESPONSE etc.) SMP(S) QoS-3-b (TRANSFER OF CONNECTION PARAMETER TO UPPER LAYER, Data Baud Rate, PRESENCE/ABSENCE OF RESPONSE etc.) LMP(S) QoS-3-c (TRANSFER OF CONNECTION PARAMETER TO UPPER LAYER, Data Baud Rate, PRESENCE/ABSENCE OF RESPONSE etc.) LAP(S)

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FIG. 53



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FIG. 54

TRANSMITTER OBEX(P) QoS-3-a (TRANSFER OF CONNECTION PARAMETER TO UPPER LAYER, Baud Rate, PRESENCE/ABSENCE OF RESPONSE etc.) SMP(P) QoS-3-b (TRANSFER OF CONNECTION PARAMETER TO UPPER LAYER, Baud Rate. PRESENCE/ABSENCE OF RESPONSE etc.) LMP(P) QoS-3-c (TRANSFER OF CONNECTION PARAMETER TO UPPER LAYER, Baud Rate, PRESENCE/ABSENCE OF RESPONSE etc.) LAP(P)

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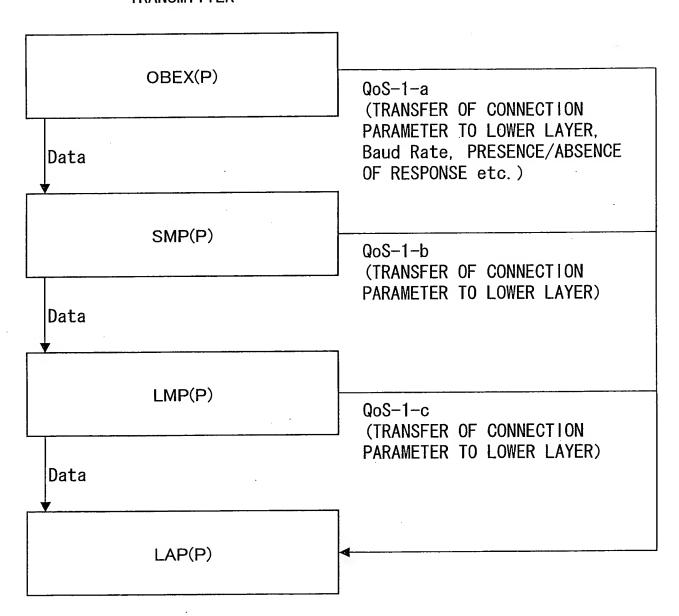
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FIG. 55

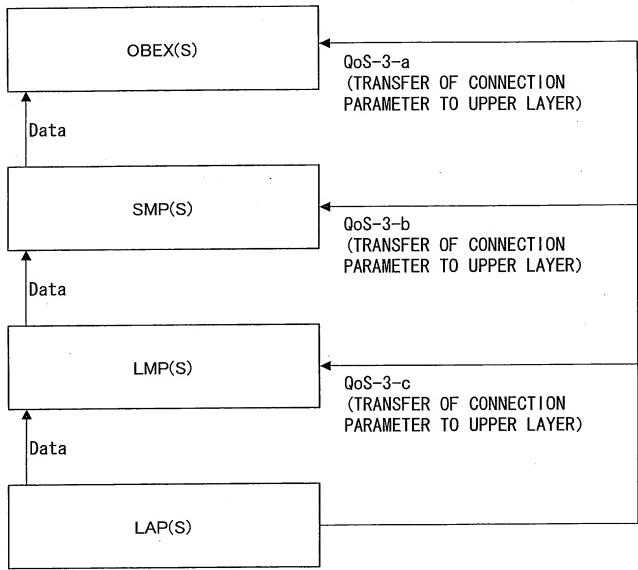
TRANSMITTER



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FIG. 56

RECEIVER



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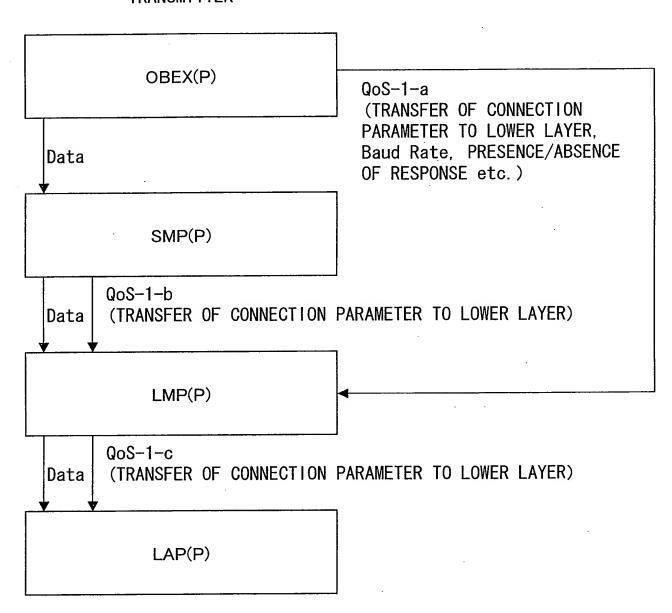
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FIG. 57

TRANSMITTER

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